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10/533,910	05/05/2005	Masakazu Koizumi	24-023-TN	9732

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POSZ LAW GROUP, PLC
12040 SOUTH LAKES DRIVE
SUITE 101
RESTON, VA 20191

EXAMINER	
GODENSCHWAGER, PETER F	
ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailbox@poszlaw.com
tvarndell@poszlaw.com
lwebbers@poszlaw.com

Response to Arguments

Applicant's arguments filed February 14, 2011 have been fully considered but they are not persuasive.

Applicant argues that the method of Braden et al. requires that caustic (NaOH) is injected into the downstream of the desalter, (citing Fig. 1 and 4:14-27 of Braden et al.) whereas the instant claims require that only choline is added to the fluid containing water. However, the instant claims do not exclude "caustic" (NaOH) as being present in "the fluid containing water which contacts the inside of the atmospheric distillation column". Braden et al. clearly teaches that the addition of caustic and the addition of amines happen in two separate steps with the addition of caustic occurring first (see Fig 1). Therefore, during the addition of amines, Braden teaches a step of adding only amines to a fluid containing water which contacts the inside of the atmospheric distillation column. That such a fluid happens to contain a previously added caustic (NaOH) does not change it's classification as "a fluid containing water which contacts the inside of the atmospheric distillation column".

Applicant argues that the data in Table 2 on Pg. 32 of the original specification shows evidence that the claimed quaternary ammonium compound in the claimed method can neutralized boiler water efficiently with an unexpectedly smaller quantity of the compound when compared to other amines, and that Tables 3 However, Table 2 compares choline, a strong base, to four weak bases, in their ability to raise the pH of an aqueous soluition. It would not be unexpected to anyone of ordinary skill in the art that a strong base will raise the pH of an aqueous solution more than a weak base. This is exactly what defines a strong base relative to a weak base.

In addition, it is noted that the data of Tables 2, 3, and 5 of the specification presents results from experiments that are not commensurate in scope with the claimed invention [see MEPE 716.02(d)]. Specifically, the results of Tables 2 and 3 do not relate to a method of preventing corrosion of metal in an atmospheric distillation column. With regards to Table 5, it is noted that the experiment (Test Example 1 of the specification) uses only one amount of the base, whereas at least independent claims 8 and 11 do not limit the amount of (β-hydroxyethyl) trimethylammonium hydroxide added. Furthermore, the procedure of Test Example 1 does not add only (β-hydroxyethyl) trimethylammonium hydroxide, but adds the compound as an aqueous solution.

With regards to Test Example 4, the example is not commensurate in scope with the instant claims as the test does not relate to a method of preventing corrosion of metal in an atmospheric distillation column. Furthermore, the data fails to provide a comparison to closest prior art. Without such a comparison, no determination as to whether the result is truly unexpected can be made.

Applicant argues that the Examiner's statement that "cyclohexylamine (the only hydrophobic compound [inTable 2]) requires a much higher weight percent to be effective when mixing with water in view of its much lower water solubility" is based on speculation is unsupported by scientific reasoning. The Examiner respectfully disagrees. Based on the number of carbons (six) and having only one hydrophilic group (NH_2) one would reasonably expect cyclohexylamine to be more hydrophobic than choline (a water soluble salt), monoethanolamine (two carbons, and two hydrophilic groups), and ammonia (a hydrophilic compound soluble in up to 37% in water). By their very nature, hydrophobic compounds are less soluble in water than

hydrophilic compounds, and therefore, less of the hydrophobic compound will go into solution compared to a hydrophilic compound and as such will not be available to react in solution.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PETER F. GODENSCHWAGER whose telephone number is (571)270-3302. The examiner can normally be reached on Monday-Friday 7:30-4:30 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on (571) 272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/P. F. G./
Examiner, Art Unit 1767

/Mark Eashoo/
Supervisory Patent Examiner, Art Unit 1767